

Lighting up your home interior

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With the shorter days of winter nearly upon us, we become more reliant on our home lighting for our daily needs. Have you taken a look at the lighting in your kitchen or bathrooms lately? For example in many of the tract home's I inspect they are woefully under lit. There is little to no task lighting and even the light over the kitchen sink is insufficient. In many bathrooms there is a multi-bulb light bar directly over the sink but no other fixtures in the room. Unfortunately, this means the person standing at the mirror is getting all the light and the rest of the bath is in the shadows.

Many of the common mistakes are easy to correct but require the skills of an electrician. If you are unhappy with the lighting in your home, start by looking at the areas that need it. Is the light falling where you need it? Good lighting starts with good design. Begin with task lighting for countertops and other work areas, and then think about general background lighting. During the process, keep in mind how natural and electric light can blend for the best results. Divide task light fixtures and overall (background or flood) lighting into independently switches. For example, counter, island, range, and sink should be on the same switch. Background lighting could be a surface-mounted fixture, a cove light mounted on top of the cabinets, or a luminous ceiling. Next, visit the local home improvement store and look at your options. Don't limit yourself to just replacing the fixture you have. A qualified electrician can permanently mount lights in just about any space and a handy homeowner easily installs under cabinets lights.

There are 3 different types of lighting available: fluorescent, incandescent and halogen. Currently, fluorescents are the most efficient light source suitable for residential use. Since kitchen lights burn for hours at a time, they offer ideal applications for both linear and compact fluorescent lights. Not only do fluorescents use less energy, they also can last 10 times longer than incandescents, making them particularly appealing for difficult-to-reach fixtures. Linear fluorescent lamps, commonly referred to as "tubes," convert electricity to light with four times greater efficiency than the typical incandescent lamp. Tubes come in a variety of sizes. Larger ones work well for ambient lighting, while the smaller models are perfectly suited for under-the-cabinet task lighting in the kitchen, for example.

Compact fluorescent lamps (CFLs) are two to three times more efficient than incandescent. Their smaller size makes them easier to screw into sockets normally occupied by incandescent, but sometimes their unique shapes are not the perfect fit for fixtures. However, there are now many choices of CFLs on the market, especially for replacing 60W and 75W incandescent. Recently, manufacturers have introduced CFLs with light output similar to a 150W incandescent bulb. There are also CFL fixtures available that take pin-based compact fluorescents so there is no need to worry about the bulb's fit. Proper fit is particularly important in enclosed fixtures, where heat buildup can affect the lamp's performance. Favorite spots for CFLs in the kitchen are over the sink and in suspended and ceiling-mounted fixtures.

Fluorescents once had a reputation for providing poor-quality light. That changed roughly 10 years ago when lamps with improved color characteristics became widely available. For inside the home, choose the warmer variety of fluorescent tubes.

Incandescents are losing favor in the market but their cheap price and familiarity will keep them around for a long time. Only 10% of the electricity that enters an incandescent lamp comes out as

light. The rest turns into heat, which must often be removed with air conditioning. Because they are so inefficient, incandescent should be used selectively for accent and task lighting, or dimming circuits where fluorescents might be too expensive.

Halogen lights produces a bright light with a color balance more like sunlight than any other artificial light for home and office use. They produce more light with less energy consumption than incandescent lights, but they also produce more heat. Although they are up to 30% more efficient than other incandescent, halogen lamps are still less efficient than fluorescents. Their main advantage is a crisp white light and better control of the light beam. The bulbs get very hot, and some precautions are in order to use them safely. I would not recommend these lamps in a children's room as they are extremely hot and potential fire hazard if paper or cloth were to be place in contact with them. Torchiere lamp (tall floor lamp with an exposed bulb on top, with a shade underneath the bulb directing the light upward) may appear safe but the risk of play objects landing on top of the lamp make it a poor choice homes with active children.

Good lighting controls put the right amount of light in exactly the right place only when it is needed. Dimmer switches reduce light output and energy use when not set at full brightness. As a practical matter, a dimming circuit should use an incandescent lamp. Halogen lamps can be a good choice because they are slightly more efficient than other incandescent. Although dimmers are available for some fluorescents, most fluorescent fixtures are not design to be dimmed and you can dramatically reduce the life of the fixtures and bulbs.

Motion sensors switches, are appropriate in areas such as garages, closets, pantries even bathrooms, where people move in and out but may not stay long. Incandescent lamps work well with motion sensors. This kind of use will shorten the life of fluorescent lamps and ballasts. These inexpensive (\$12-\$25) switches are readily available at most home improvement stores and are an easy replacement for existing switches.

If you are not comfortable changing an outlet, switch or light fixture, then call a professional. It is better to be safe than to discover how much voltage is in the wires!

Rick Bunzel is the Principle Inspector at Mountain View Property Inspections. If you would like to know more about your home go to **WWW.MVPinspection.com** If you have questions or comments, Rick Bunzel can be contacted at Mountain View Property Inspections @ 303-443-9063 or MVPInspection@attbi.com